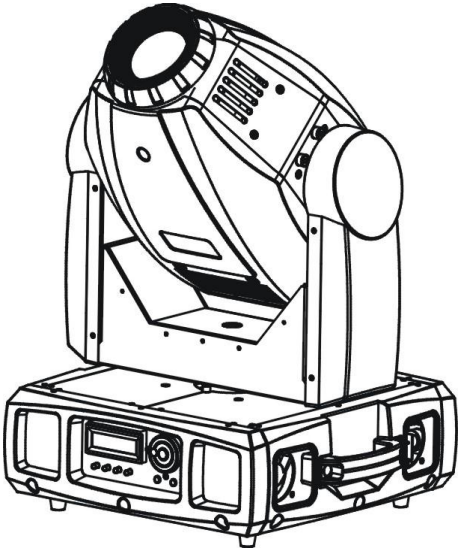
DMX 512

LINKABLE

REMOTE ADDRESS SETTING



IM - 250 SP

User Guide

Please read these instructions carefully before use

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1. Safety Instruction

WARNING

Please read carefully the instruction, which includes important information about the installation, usage and maintenance.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Unpack and check carefully there is no transportation damage before using the unit.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- The unit is designed for use with the HMQ 250/2G lamps. Do not use any other type of lamp.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The unit is for indoor use only. Use only in a dry location.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Disconnect main power before fuse/lamp replacement or servicing.
- Replace fuse/lamp only with the same type.
- Make sure there are no flammable materials close to the unit while operating, as it is fire hazard.
- Please use safety chain while you fixing this unit. Don't handle the unit by taking its head only, but always by taking its base.
- Maximum ambient temperature is ta : 40℃. Don't operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 85℃. Don't touch the housing bare-hand during its operation, and allow about 15 minutes to cool down before replacing bulb or serving, as the unit could be very hot.
- In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- Don't connect the device to any dimmer pack.
- Do not touch any wire during operating as there might be a hazard of electric shock.

Warning

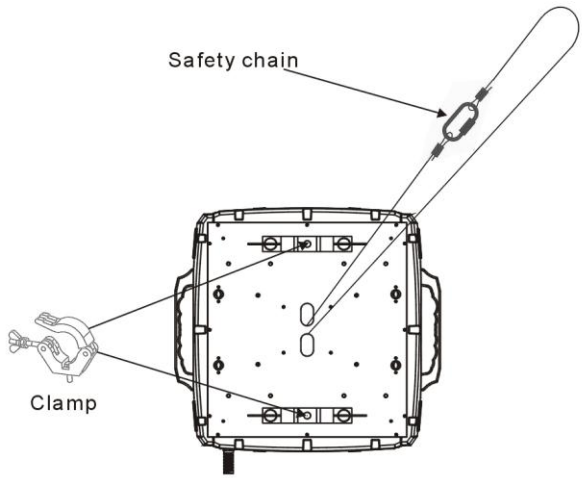
- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- Never touch bulb with bare fingers, as it is very hot after using.
- Hot lamp explosion hazard. Do not open the unit within five minutes after switching off.
- Do not start on the unit without bulb enclosure or when housing is damaged.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- Do not look directly at the light while the bulb is on.

Caution

There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs by yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

Installation

The unit should be mounted via its mounting system (as shown below) on the bottom of the base. Use clamps to fix the unit to truss. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. Always ensure that the structure to which you are attaching the unit is secure and is able to support a weight of 50 kg for each unit.



2. Technical Specification

Power supply

- 120V/230V~50/60Hz

Lamp

- HMQ 250/2G

Optical system

- High efficiency optical system
- High quality optical lens and dichroic colors
- Beam angle: 15°

Shutter/Dimmer

- Blackout, 0~100% smooth dimming and strobe speed variable(1~12 flashes per second).

Color wheel

- Color wheel 1: 6 color + white
- Color wheel 2: 7 trapezoid dichroic colors plus white
- Both rotate in both directions at different speeds, creating rainbow effect.
- Magnetic Color wheels home positioning for easy calibration and easy maintenance.

Gobo wheel

- Fixed gobo wheel 1: 5 rotating, interchangeable, indexing gobos plus open
- Rotating gobo wheel 2: 7 metal gobos plus open
- Magnetic Gobo wheels home positioning for easy calibration and easy maintenance.
- Both rotate in both directions at different speeds, creating shaking effect..

Effect Wheel

- Prism/Rotating Prism

Movement

- Pan: 540° in 2.8 second.
- Tilt: 270° in 1.6 second.
- Pan/Tilt resolution: 8/16-bit.
- Automatic Pan/Tilt correction.
- Electronic sensor Pan/Tilt home positioning for easy calibration and easy maintenance.
- Pan/Tilt position lock for transporting protection.

Focus

- Automatic focus by DMX controls.

Iris

- Motorized iris for different beam diameters.
- Iris Speed control.

DMX Channels

- Standard DMX512 signal addressing and can be controlled by any universal DMX controller or *DMX Tester*.

22 Channels:

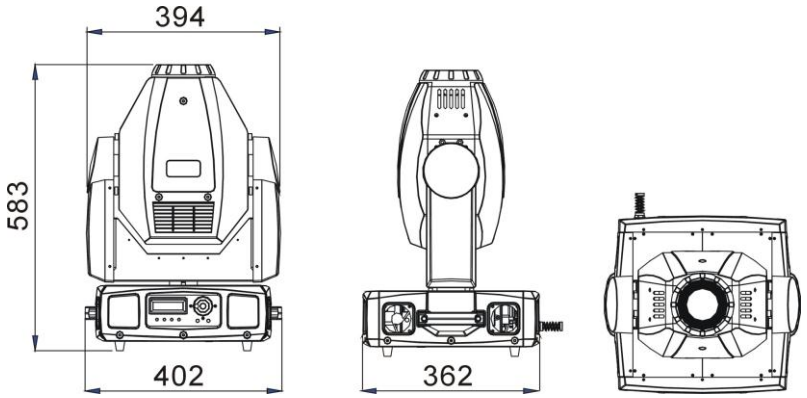
Channel 1 = Pan	Channel 12 = Prism
Channel 2 = Tilt	Channel 13 = Prism Rotation
Channel 3 = Pan/Tilt speed	Channel 14 = Focus
Channel 4 = Dimmer	Channel 15 = Iris
Channel 5 = Shutter/shaking	Channel 16 = Lamp ON/OFF/Reset
Channel 6 = Color 1	Channel 17 = Pan movement fine
Channel 7 = Color 2	Channel 18 = Tilt movement fine
Channel 8 = Gobo 1	Channel 19 = Pan/Tilt movement macro
Channel 9 = Gobo 1 Rotation	Channel 20 = Pan/Tilt movement size
Channel 10 = Gobo 2	Channel 21 = Iris effect
Channel 11 = No function	Channel 22 = Dimmer effect

16 Channels:

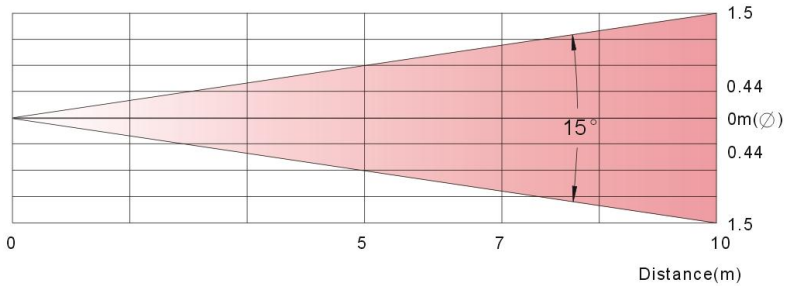
Channel 1 = Pan	Channel 9 = Gobo 1 Rotation
Channel 2 = Tilt	Channel 10 = Gobo 2
Channel 3 = Pan/Tilt Speed	Channel 11 = No function
Channel 4 = Dimmer	Channel 12 = Prism
Channel 5 = Shutter/shaking	Channel 13 = Prism Rotation
Channel 6 = Color 1	Channel 14 = Focus
Channel 7 = Color 2	Channel 15 = Iris
Channel 8 = Gobo 1	Channel 16 = Lamp ON/OFF/Reset

Dimension: 402 x 362 x 583 mm

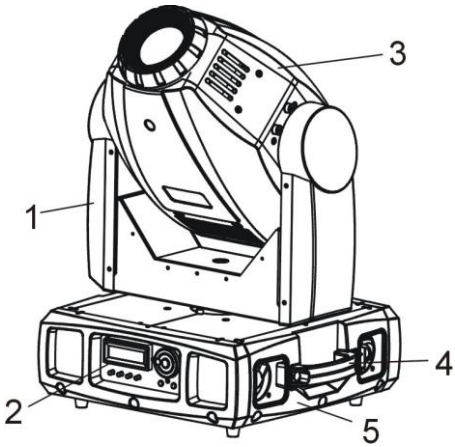
Weight: 25 kg



Luminous intensity:



2.1. Description of the fixture

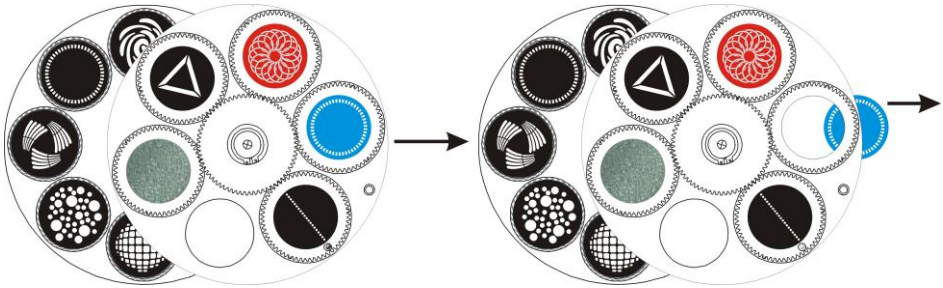


1. Yoke
2. Front panel
3. Moving head
4. Handle
5. Base

2.2. Inserting/Exchanging rotating gobos

DANGER!
Install the gobos with the device switched off only.
Unplug from mains before changing gobos!

Open the cover by loosening the fastening screw at the sides of the cover.
If you wish to use other forms and patterns as the standard-gobos, or if the gobos are to be exchanged, remove the fixation ring with an appropriate tool. Remove the gobo and insert the new gobo. Press the fixation-ring together and insert it in the front of the gobo.



CAUTION!

Never unscrew the screws of the rotating gobo as the ball bearing will otherwise be opened!

3. Lamp

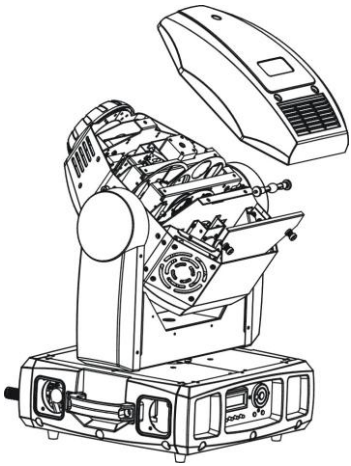
In case of replacement of the lamp or maintenance, do not open the fixture within 15 minutes until the unit cools down after switching off.

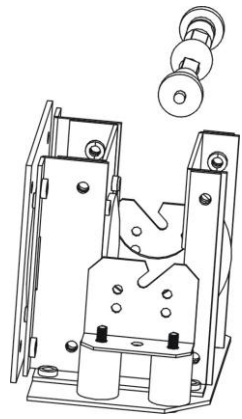
WARNING

Because of its high internal pressure, there might be a risk that the Discharge lamp would explode during operation. The lamp emits intense UV radiation which is harmful to the eyes and skin. The high luminance of the arc can cause severe damage to the retina if looks directly at the lamp.

HMQ 250/2G

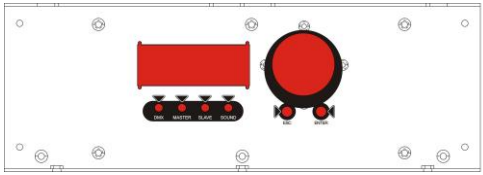
1. Always switch off the main supply and never handle the lamp or luminaire when it is hot.
2. Do not touch the bulb with bare hands. If this happens, clean the lamp with denatured alcohol and wipe it with a lint free cloth before installation.
3. The lamp generates UV radiation. Never operate the lamp without appropriate shielding.
4. When burning, the lamp operates at high pressure and there is a slight risk of arc tube rupture. The risk increases with age, temperature and improper handling of the lamp. Do not use the lamp any longer than its lifespan.
5. Make sure the lamp is located in the center of the reflector for the best spot.
6. If changing the lamp, remove old lamp from lamp socket. Hold the new lamp only by its ceramic base. Never touch the glass bulb. Insert the new lamp in the lamp socket.





4. How To Set The Unit

4.1. Control Panel



MONITOR

To show the various menus

LED

DMX	On	DMX input present
MASTER	On	Master Mode
SLAVE	On	Slave Mode
SOUND	Blinking	Sound Mode

Button

ESC	To go back to the previous functions
ENTER	To confirm the selected functions
JOG WHEEL	To select the given functions

On/Off

Turns On/Off the power

Fuse

To replace the fuse

DMX input/output

For DMX 512 operation, use 3/5-pin XLR plug cable to link the unit together

Sensitivity

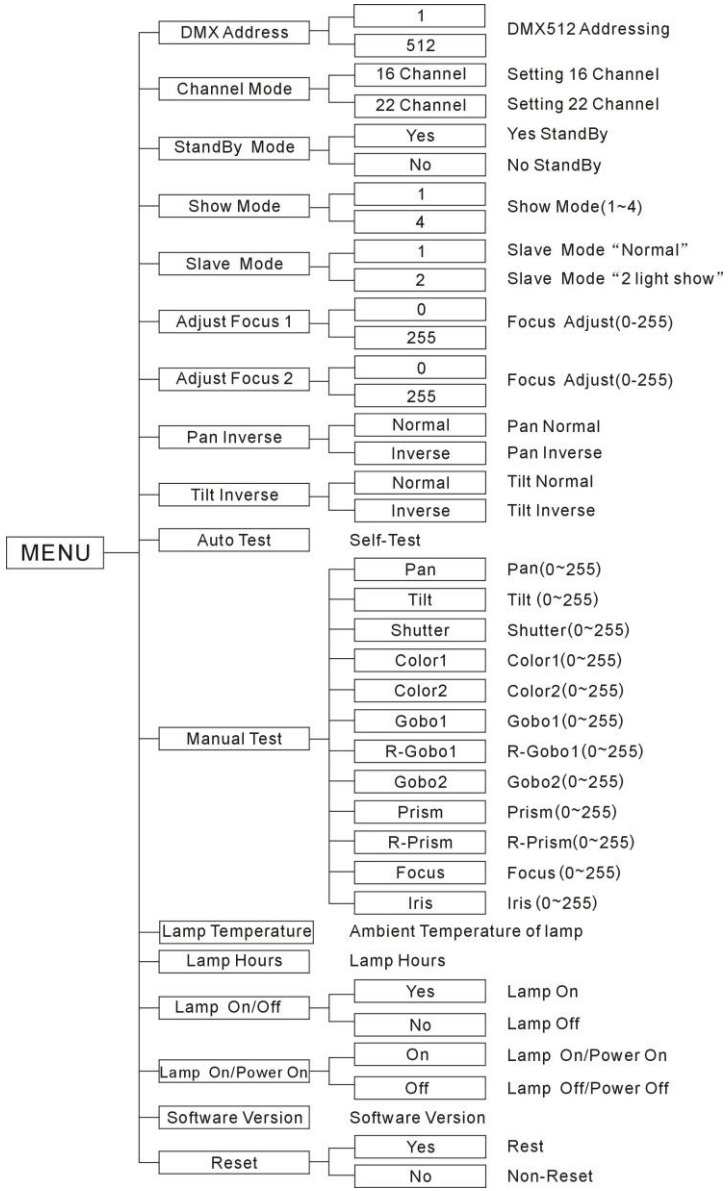
To receives audio signal for sound activation.

Only for remote control

By connect to the 1/4" microphone jack to control the unit for Stand by, Function and Mode function.

4.2. Main Function

To select any of the pre-set functions, press the **ENTER** button and turn jog wheel up to when the required one is shown on the monitor. Select the function by **ENTER** button. Use the jog wheel to change the mode. Once the required mode has been selected, press the **ENTER** button to setup or it will automatically return to the main functions without any change after idling 10 seconds. To go back to the previous functions without any change press the **ESC** button. The main functions are shown below:



DMX 512 Address Setting

Press the **ENTER** button and turn jog wheel up to when the **DMX Address** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to change the DMX 512 address. Once the address has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Channel Mode

Press the **ENTER** button and turn jog wheel up to when the **Channel Mode** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (16 Channel) or (22 Channel) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

StandBy Mode

Press the **ENTER** button and turn jog wheel up to when the **StandBy Mode** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (yes standby) or (no standby) Mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Show Mode

Press the **ENTER** button and turn jog wheel up to when the **Show Mode** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to change the Show Mode (1~4). Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Slave Mode

Press the **ENTER** button and turn jog wheel up to when the **Slave Mode** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (Normal) or (2 light show) Mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Adjust Focus 1

Press the **ENTER** button and turn jog wheel up to when the **Adjust Focus 1** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to change the focus 1 (0-255). Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back

to the previous functions without any change press the **ESC** button.

Adjust Focus 2

Press the **ENTER** button and turn jog wheel up to when the **Adjust Focus 2** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to change the focus 2 (0-255). Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Pan Inversion

Press the **ENTER** button and turn jog wheel up to when the **Pan Inversion** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select (Normal) or (Inversion) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Tilt Inversion

Press the **ENTER** button and turn jog wheel up to when the **Tilt Inversion** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (Normal) or (Inversion) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Auto Test

Press the **ENTER** button and turn jog wheel up to when the **Auto Test** is shown on the monitor. Pressing **ENTER** button and the display will blink. select option and the unit will run self-test by built-in program. To go back to the main functions press the **ESC** button twice.

Manual Test

Press the **ENTER** button and turn jog wheel up to when the **Manual Test** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (Pan) or (Tilt) or (Shutter) or ……mode. Once the mode has been selected, press the **ENTER** button and use jog wheel to select the 0~255 value. Once the value has been selected, press the **ENTER** button to setup or automatically return to the main functions

without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Lamp Temperature

Press the **ENTER** button and turn jog wheel up to when the **Lamp Temperature** is shown on the monitor. Pressing **ENTER** button and the ambient temperature of lamp will show on the monitor. To go back to the main functions press the **ESC** button twice.

Lamp Hours

Press the **ENTER** button and turn jog wheel up to when the **Lamp Hours** is shown on the monitor. Pressing **ENTER** button and the monitor will show the number of working hours of the unit. To go back to the main functions press the **ESC** button twice.

Lamp On/Off

Press the **ENTER** button and turn jog wheel up to when the **Lamp On/Off** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (Lamp on) or (Lamp off) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Lamp On/Power On

Press the **ENTER** button and turn jog wheel up to when the **Lamp On/Power On** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (on) or (off) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Software Version

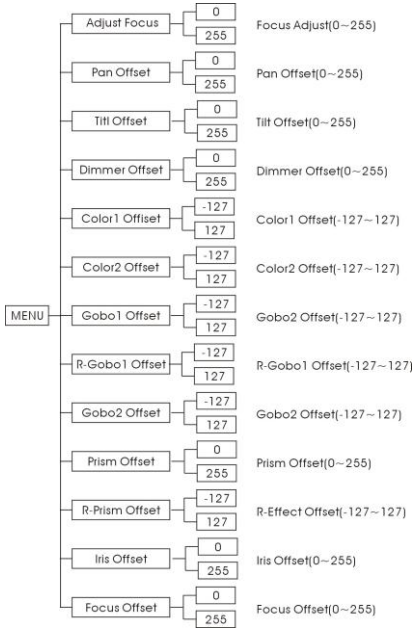
Press the **ENTER** button and turn jog wheel up to when the **Software Version** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (A) or (B) or (C) or (D) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Reset

Press the **ENTER** button and turn jog wheel up to when the **Reset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to select the (Yes) or (No) mode. select (Yes) option and all channels of the unit will return to their standard position. To go back to the main functions press the **ESC** button twice.

4.3. Home Position Adjustment

Press **ENTER** button into main function, and then press **ENTER** button for at least 12 seconds into offset mode to adjust the home position, when you want to adjust gobo and color home position, you should be run **Adjust Focus** mode first , the functions are shown below:



Adjust Focus

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Adjust Focus** is shown on the monitor. Pressing **ENTER** button and the display will blink. The unit will focus on tilt 135°, and then the unit will focus on tilt 45°, pan 90°, pan 180°, pan 270° in every pressing **ENTER** button. Once the focus has been selected, use jog wheel to adjust this settings only for offset mode to adjust home position. To go back to the previous functions without any change press **ESC** button

Pan offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Pan offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the pan home position. Once the position has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Tilt offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Tilt offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the tilt home position. Once the position has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Dimmer offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Dimmer offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the dimmer home position. Once the position has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Color 1 offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Color 1 offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the color 1 home position. Once the color has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Color 2 offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Color 2 offset** is shown on the monitor. Pressing **ENTER** button and the

display will blink. Use jog wheel to adjust the color 2 home position. Once the color has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Gobo 1 offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Gobo 1 offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the gobo 1 home position. Once the gobo has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

R-Gobo 1 offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **R-Gobo 1 offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the R-gobo 1 home position. Once the R-gobo has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Gobo 2 offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Gobo 2 offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the gobo 2 home position. Once the gobo has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Prism offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Prism offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the prism home position. Once the prism has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any

change after 10 seconds

R-Effect offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **R-Effect offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the R-Effect home position. Once the R-effect has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Iris offset

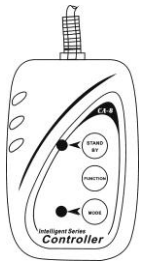
Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Iris offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the iris home position. Once the position has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

Focus offset

Press the **ENTER** button for at least 12 seconds into offset mode, turn jog wheel up to when the **Focus offset** is shown on the monitor. Pressing **ENTER** button and the display will blink. Use jog wheel to adjust the iris home position. Once the position has been selected, press the **ENTER** button to setup or automatically return to the offset functions without any change press the **ESC** button. To go back to the main functions without any change after 10 seconds

4.4 Easy Controller

The easy remote control is used only in master/slave mode. By connecting to the 1/4” microphone jack of the first unit, you will find that the remote control on the first unit will control all the other units for Stand by, Function and Mode.



Stand by	Blackout the unit			
Function	Strobe 1. Sync. strobe 2. Two-light strobe 3. Sound strobe	X/Y moving show pattern selection (Show 1 ~ Show 4) Please refer to 4.2. Main Functions- Show mode	Gobo/Color selection 1.Hold on for gobo selection 2.Press for color change	X/Y moving setting 1.Pan position 2.Tilt position 3.Dimmer First set Master unit, then set Slave units' position
Mode	Sound 1 (LED off)	Sound 2 (LED slow blinking)	Slow/Sound 3 (LED on)	Position/ Latch (LED fast blinking)

5. How To Control The Unit

You can operate the unit by universal DMX controller:

No need to turn the unit off when you change the DMX address, as new DMX address setting will be effected at once. on the monitor and move all the motors to their 'home' position and you may hear some noises for about 20 seconds. After that the unit will be ready to receive DMX signal.

5.1. DMX Controller

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 channel so that the units can receive DMX signal.

Press the **ENTER** button up to when the **DMX address** is shown on the monitor. Pressing **ENTER** button and the monitor will blink. Use jog wheel to change the DMX512 address. Once the address has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after 10 seconds. To go back to the previous functions without any change press the **ESC** button.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Mode	Fixture 1	Fixture 2	Fixture 3	Fixture 4
16 CH	1	17	33	49
22 CH	1	23	45	67

5.2. DMX 512 Configuration

16 Channels DMX-512 Configuration

Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Pan	Tilt	Pan/Tilt speed selection	Dimmer	Shutter/Shaking	Color 1	Color 2	Gobo1
		255 Slow 0 Fast	255 100% 0 0%	248-255 Open 240-247 Random strobe 239 Fast shaking (gobo2) 186 Slow shaking (gobo2) 185 Fast shaking (gobo1) 132 Slow shaking (gobo1) 131 Fast strobe 016 Slow strobe 008-015 Open 000-007 Blackout	255 Slow 192 Fast 191 Fast 128 Slow 064-127 Position 055-063 Green 046-054 Blue 037-045 Orange 028-036 Magenta 019-027 Light yellow 010-018 Red 000-009 White	248-255 Macro 6 240-247 Macro 5 232-239 Macro 4 224-231 Macro 3 216-223 Macro 2 208-215 Macro 1 207 Slow 168 Fast 167 Fast 128 Slow 114-127 Frost 095-113 3200K 076-094 UV Purple 057-075 Light green 038-056 Pink 019-037 Light Blue 000-018 White	255 Slow 192 Fast 191 Fast 128 Slow 106-127 085-105 064-084 043-063 022-042 000-021
Channel 9	**Channel 10**	**Channel 11**	**Channel 12**	**Channel 13**	**Channel 14**	**Channel 15**	**Channel 16**
Gobo1 Rotation	Gobo2	No Function	Prism	Prism Rotation	Focus	Iris	Lamp on/off/reset
255 Slow 192 Fast 191 Fast 128 Slow 127 Gobo1 Index 360° 000 Gobo1 Index 0°	255 Slow 192 Fast 191 Fast 128 Slow 112-127 096-111 080-095 064-079 048-063 032-047 016-031 000-015		232-255 Macro(10) 208-231 Macro(9) 184-207 Macro(8) 160-183 Macro(7) 136-159 Macro(6) 112-135 Macro(5) 088-111 Macro(4) 064-087 Macro(3) 040-063 Macro(2) 016-039 Macro(1) 008-015 Prism 000-007 No prism No macro	255 Slow 192 Fast 191 Fast 128 Slow 127 Prism Index 360° 000 Prism Index 0°	255 0	255 Min. 0 Max.	200-209 Reset fixture 230-239 Lamp off 130-139 Lamp on 120-129 disable shutter off while gobo1 or gobo2 change 110-119 enable shutter off while gobo1 or gobo2 change 100-109 disable shutter off while color1 or color2 change 090-099 enable shutter off while colcor1 or color2 change 080-089 disable shutter off while pan or tilt move 070-079 enable shutter off while pan or tilt move

G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12

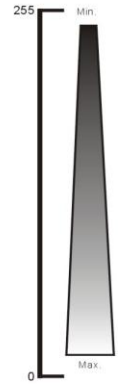
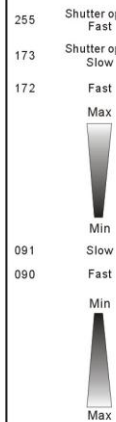
22 Channels DMX-512 Configuration(1)

Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Pan	Tilt	Pan/Tilt speed selection	Dimmer	Shutter/Shaking	Color 1	Color 2	Gobo1
540°	270°	255 Slow 0 Fast	255 100% 0 0%	248-255 Open 240-247 Random strobe 239 Fast shaking (gobo2) 186 Slow shaking (gobo2) 185 Fast shaking (gobo1) 132 Slow shaking (gobo1) 131 Fast strobe 016 Slow strobe 008-015 Open 000-007 Blackout	255 Slow 192 Fast 191 Fast 128 Slow 064-127 Position 055-063 Green 046-054 Blue 037-045 Orange 028-036 Magenta 019-027 Light yellow 010-018 Red 000-009 White	248-255 Macro 6 240-247 Macro 5 232-239 Macro 4 224-231 Macro 3 216-223 Macro 2 208-215 Macro 1 207 Slow 168 Fast 167 Fast 128 Slow 114-127 Frost 095-113 3200K 076-094 UV Purple 057-075 Light green 038-056 Pink 019-037 Light Blue 000-018 White	255 Slow 192 Fast 191 Fast 128 Slow 106-127 085-105 064-084 043-063 022-042 000-021
270°	135°						
0°	0°						

Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
Gobo1 Rotation	Gobo2	No Function	Prism	Prism Rotation	Focus	Iris	Lamp on/off/reset
255 Slow 192 Fast 191 Fast 128 Slow 127 Gobo1 Index 360° 000 Gobo1 Index 0°	255 Slow 192 Fast 191 Fast 128 Slow 112-127 096-111 080-095 064-079 048-063 032-047 016-031 000-015		232-255 Macro(10) 208-231 Macro(9) 184-207 Macro(8) 160-183 Macro(7) 136-159 Macro(6) 112-135 Macro(5) 088-111 Macro(4) 064-087 Macro(3) 040-063 Macro(2) 016-039 Macro(1) 008-015 Prism 000-007 No prism No macro	255 Slow 192 Fast 191 Fast 128 Slow 127 Prism Index 360° 000 Prism Index 0°	255 0	255 Min. 0 Max.	200-209 Reset fixture 230-239 Lamp off 130-139 Lamp on 120-129 disable shutter off while gobo1 or gobo2 change 110-119 enable shutter off while gobo1 or gobo2 change 100-109 disable shutter off while color1 or color2 change 090-099 enable shutter off while colcor1 or color2 change 080-089 disable shutter off while pan or tilt move 070-079 enable shutter off while pan or tilt move

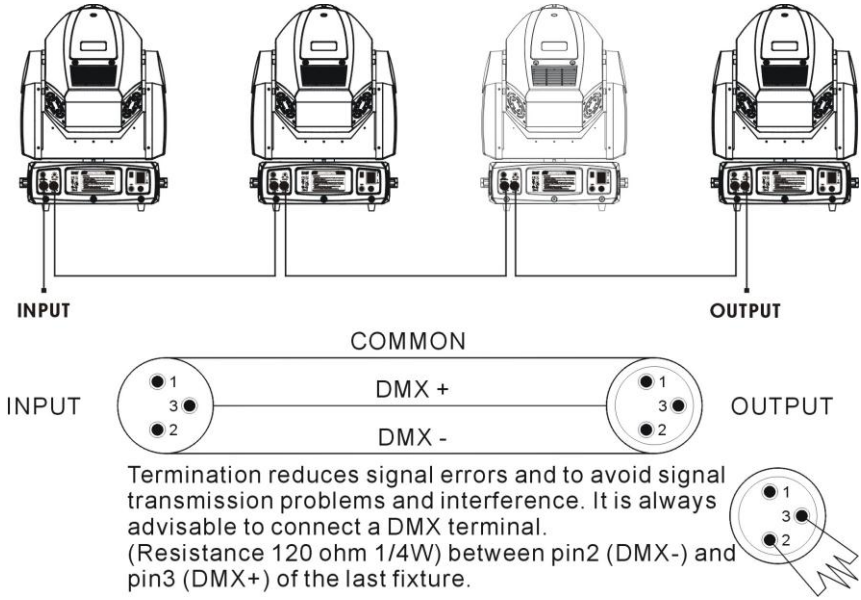
G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12

22 Channels DMX-512 Configuration(2)

Channel 17	Channel 18	Channel 19	Channel 20	Channel 21	Channel 22
Pan movement fine	Tilt movement fine	Pan/Tilt movement macro	P a n / T i l t movement size	Iris effect	Dimmer effect
		248-255 Macro 16 240-247 Macro 20 232-239 Macro 19 224-231 Macro 18 216-223 Macro 17 208-215 Macro 16 200-207 Macro 20 192-199 Macro 19 184-191 Macro 18 176-183 Macro 17 168-175 Macro 16 160-167 Macro 20 152-159 Macro 19 144-151 Macro 18 136-143 Macro 17 128-135 Macro 16 120-127 Macro 15 112-119 Macro 14 104-111 Macro 13 096-103 Macro 12 088-095 Macro 11 080-087 Macro 10 072-079 Macro 9 064-071 Macro 8 056-063 Macro 7 048-055 Macro 6 040-047 Macro 5 032-039 Macro 4 024-031 Macro 3 016-023 Macro 2 008-015 Macro 1 000-007 No Macro		 000-007 no macro	 000-007 no macro

5.3. DMX512 Connection

The DMX 512 is widely used in intelligent lighting control, with a maximum of 512 channels.



1. If you use a controller with 5 pins DMX connector, you need to use a 5 to 3 pin adapter.
2. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
3. Connect the unit together in a “daisy chain” by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a “Y” cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
4. The DMX output and input connectors are pass-through to maintain the DMX circuit, when power is disconnected to the unit.
5. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
6. The end of the DMX 512 system should be terminated to reduce signal errors.
7. 3 pin XLR connectors are more popular than 5 pins XLR.
   3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
   5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

6. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. No response to the sound

1. Make sure the unit is not receiving DMX signal.
2. Check microphone to see if it is good by tapping the microphone.

D. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

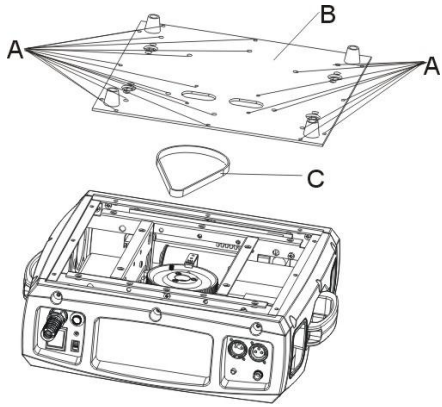
E. The lamp is cutting out intermittently

1. The lamp is not working well. Check the main voltage either too high or too low.
2. Internal temperature may be too high. Check and if necessary replace the fan on the head.

F. If The pan belt is broken

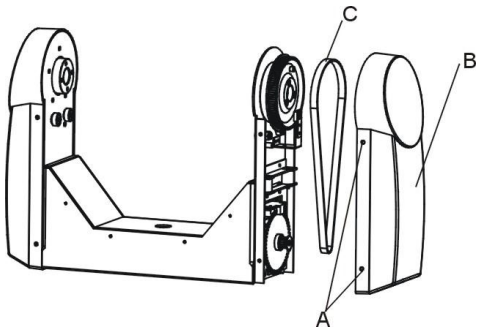
1. Turn off the main power.
2. Unscrew all the screws (A) and open the base-housing cover (B).

3. Unplug all the connect wires that upon belt.
4. Change a new belt (C), put the belt around the axis gear and motor gear.
5. Install the new belt and adjust the belt tension properly.
   Note: do not fix the belt too tight as it is easy to rupture.
6. Plug all the connect wires back that upon belt.
7. Screw all the screws (A)



G. If The tilt belt is broken

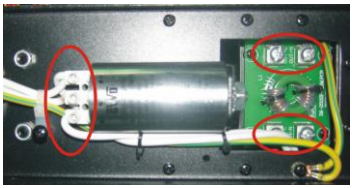
1. Turn off the main power.
2. Unscrew all the screws (A) and open the right arm cover(B).
3. Change a new belt (C). Please adjust the tension of the belt properly. Note: do not fix the belt too tight as it is easy to rupture.
4. Screw all the screws(A)



7. Maintenance and Cleaning

Maintenance:

Ballast



Ignitor

connector

A. As the picture above, if the cable or cable joints turned yellow or black, please replace the cable or cable joints immediately.

B. Do maintain the fixtures every two months and make sure that all the screws and terminals have been locked to make sure the normal performance of the fixtures. Negligence of maintenance would cause malfunction of the fixture.

Cleaning:

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

EC Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

EN55014-2: 1997 A1:2001, EN61000-4-2: 1995; EN61000-4-3:2002; EN61000-4-4: 1995; EN61000-4-5: 1995, EN61000-4-6:1996, EN61000-4-11: 1994.

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Harmonized Standard

EN 60598-1: 2004
IEC 60598-1:2003+ corrigendum 2004
Part 1:General requirements and test

Following the provisions of the low voltage directive 73/23/EEC and 93/68/EEC

Innovation, Quality, Performance